The Training School Bulletin

AUGUST, 1959 Volume 56 – Number 2

Report on Conference . . .
The Training School

Research Symposium . . .
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"for the practicing professions concerned with mental retardation"

the training school BULLETIN
is published quarterly by the Training School at Vineland, New Jersey, a private, non-profit School for retarded children, organized in 1888 as a pioneer in the study, education and care of those whose minds have not developed normally.

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The BULLETIN is open to original articles dealing with the aspect of mental retardation. The Editors will consider for publication the following types of material:

1. Articles of a technical nature, e. g., reports of research, discussion of problems in the field.
2. Non-technical articles of general interest, e. g., human interest stories of the mentally retarded, restatements of technical material for the layman.
3. Book reviews and news notes.
4. In special instances, republication of important articles having limited distribution.

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the training school BULLETIN

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Editorial:

At the Risk of Being Practical

THE REPORT in this issue of the Conference dealing with procedures for bringing together numerous professional fields working with the mentally retarded once again points up a modern dilemma. The development of the printing press enabling ever more of man's thoughts to be permanently enscribed for future generations has brought us to a point of confusion where it is quite impossible for anyone to know all on record concerning his field. As a result we find ourselves in the age of specialization, which, of course, results in a different kind of confusion. We now have, presumably, individuals with great knowledge of segments of total information, although even these must be subdivided as more printed records accumulate.

In this manner, we must contrive all sorts of methods to bring the pieces together. However, personalities being what they are, we face obstacles. The pursuit of narrower areas of information tends to bring on a strongly defensive attitude on the part of many workers regarding the value of their particular contribution to any problem at hand. To avoid this, it is easy to support the idea that everyone should be permitted to say his piece, since, even if he may stray far afield, there is a chance that some distant thought might click in another listener's ear and thus justify the procedure.

This is similar to the argument used in printing almost everything from everyone, which accounts for the tremendous accumulation of material which demands extra-specialization.

It would seem that sooner or later a procedure wil have to come to light allowing for the creation of some acceptable judicial bodies, be they part of small workshops or part of large editorial ventures, which will do their best to screen out much material which for one reason or another cannot stand up to the best we may know at any one time in techniques, research design, or in pertinence. Without this system, we can only look forward to larger and larger Univacs to remember for us. Perhaps even this may represent progress.

W. J.

REPORT OF CONFERENCE

PRACTICAL PROBLEMS OF COORDINATING AND INTEGRATING ALL SERVICES RELATED TO THE TREATMENT, TRAINING AND MANAGEMENT OF THE MENTALLY RETARDED

(held May 11-12, 1959, by the Training School at Vineland
in cooperation with the New Jersey Department of Institutions and Agencies
under a grant developed by the National Institute of Mental Health.)

PREFACE

On May 11-12, 1959, a two-day Conference on Practical Problem of Coordinating and Integrating All Services Related to the Treatmen Training and Management of the Mentally Retarded was held on the mai campus of the Training School at Vineland, New Jersey. The Conferenc was co-sponsored by The Training School and The New Jersey Departmen of Institutions and Agencies, under a grant developed by The National In stitute of Mental Health. More than 100 resource persons, participants, an observers took part in the Conference, which included lectures, panels and workshops.

The purpose of the Conference, in light of today's knowledge an current practice, was to organize the needs, principles and techniques o coordinating and integrating information about a mental retardate into meaningful individual treatment, training and management program.

Discussion centered on information supplied and used by professiona personnel in the Clinical areas of psychology, psychiatry, education, speec and hearing, management (daily care), medicine and social work.

The goal was to produce a set of written, specific, desirable practic of coordinating and integrating information which can be utilized by worke in public schools, institutions, clinics, private practice, and those agencie or individuals directly concerned with mental retardation.

CONFERENCE AGENDA

MONDAY, MAY 11, 1959

10:00-11:00—PRESIDING, Harold A. Delp, Ph.D.
INVOCATION, Rev. Edwin L. Werner, Pilgrim Congregational Church, Vineland.
WELCOME, Walter Jacob, Ph.D.
LECTURE, "Diagnosis, Original and Continuing", Margaret J. Giannini, M.D.

11:15-12:15—LECTURE, "Recommendations By Clinicians", William P. Hurder, M.D.

12:30- 1:30—LUNCHEON

1:30- 4:30—WORKSHOP, "Interpreting and Reporting Information to Using Personnel."

6:30- 7:30—PRESIDING, Walter Jacob, Ph.D.
INVOCATION, Rev. William Grosvenor, First Presbyterian Church, Vineland.
DINNER
INTRODUCTIONS of Honored Guests, Walter Jacob, Ph.D.

7:30- 9:00—PANEL, "The Collection of Information."

TUESDAY, MAY 12, 1959

9:15-12:15—PRESIDING, Clifford P. Lockyer
WORKSHOP, "Application of Recommendations."

12:30- 1:30—LUNCHEON

1:30- 3:00—PANEL, "The Team Approach."

3:15- 4:30—SUMMARY OF WORKSHOPS
CLOSING REMARKS, Walter Jacob, Ph.D.
BENEDICTION, Rabbi Martin Douglas, Beth Israel Congregation, Vineland.

CONFERENCE RESOURCE PERSONS

Lecturers — Marjaret J. Giannini, M.D., Administrative Director, Menta Retardation Clinic, New York Medical College, One East 105th Street New York, New York.
William P. Hurder, M.D., Assistant Director for Mental Health Southern Regional Educational Board, 1075 Ferncliff Road, N. E. Atlanta 5 Georgia.

Management — Gunnar Dybwad, J.D., Executive Director, National Assn. for Retarded Children, 99 University Place, New York 3, New York
Edward L. French, Ph.D., Director, The Devereux Schools, Devon Pennsylvania.

Psychiatry — Reynold A. Jensen, M.D., Professor of Psychiatry and Pedi atrics, University of Minnesota Medical School, Minneapolis, Minn.
George S. Stevenson, M.D., National and International Consultant National Assn. for Mental Health, 10 Columbus Circle, New York New York.

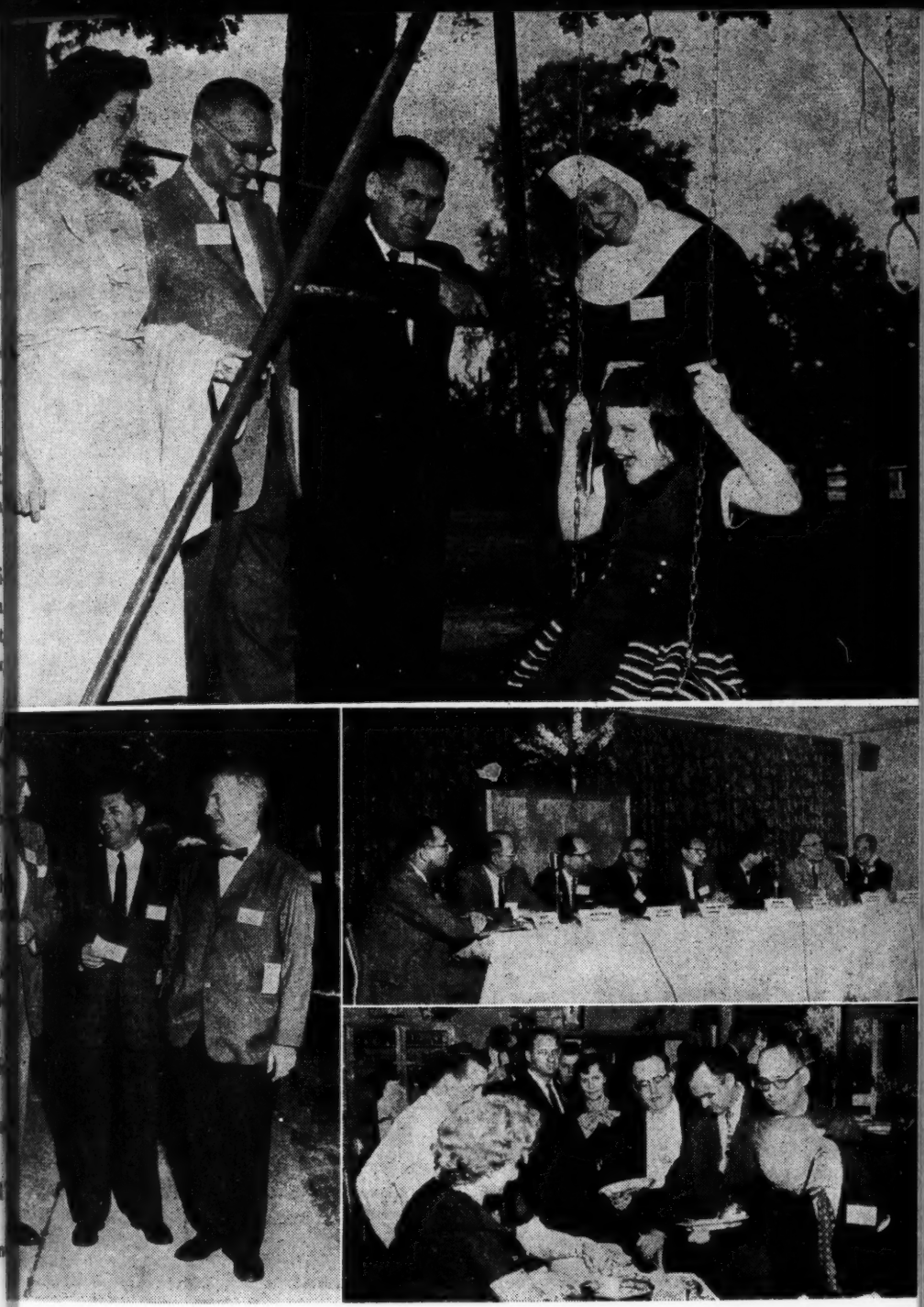
Psychology — Harold I. Michal-Smith, Ph.D., Director, Department of Psy chology, New York Medical College, One East 105th Street, New York 29, New York.
Harry V. Bice, Ph.D., New Jersey Crippled Children's Commission 211 E. State Street, Trenton, New Jersey.

Social Work — Michael J. Begab, Specialist on Social Services for Mentally Retarded Children, Children's Bureau, Department of Health, Education & Welfare, Washington 25, D. C.
Howard R. Kelman, Instructor in Pediatrics, New York Medical College, Metropolitan Medical Center, 17-15 Utopia Parkway, Whitestone, Queens, New York.

Medicine — Kurt Glaser, M.D., Acting Director, Mental Hygiene Clinic School of Medicine, University of Maryland, Baltimore, Maryland.
Arthur E. Whitney, M.D., Superintendent, Elwyn Training School Elwyn, Pennsylvania.

Education — Chris J. DeProspo, Professor, City College of New York, 1 Lexington Avenue, New York 10, New York.
Harvey A. Stevens, Superintendent, Central Wisconsin Colony and Training School, 301 Troy Drive, Madison 4, Wisconsin.

Speech-Hearing — Jack Matthews, Ph.D., Chairman, Speech Department University of Pittsburgh, Pittsburgh 38, Pennsylvania.
Bernard B. Schlanger, Ph.D., Director, Speech and Hearing Clinic West Virginia University, Morgantown, West Virginia.



1959 CONFERENCE AT THE TRAINING SCHOOL

Top: Group of Conference participants tour Training School and chat with young dent; Bottom left: Dr. Maurice Kott, Dr. Walter Jacob, Dr. Harry V. McNeill; ter: Panel Session, "The Collection of Information;" Bottom right: Luncheon during ference.

Left to right, top to bottom: Sub-workshop on Psychiatry; luncheon; Sub-
shop on Management; Sub-workshop on Social Work; Sub-workshop on Speech-He
Dr. William P. Hurder; Dr. Margaret Giannini; Conference Group, Edward F
Dr. Bernard Schlanger, Dr. Walter Jacob, Dr. Harold Michal-Smith, Dr. Harry V.
Sub-workshop on Medicine.

CONFERENCE . . .

OPENING REMARKS

walter jacob

It is good to be able to welcome you to another conference and to see unfolding the thinking and planning of so many people over the last twelve months. Your presence representing so many fields of work and interest again points up the necessity for an interdisciplinary approach whenever we attempt to delve into a problem concerning mental retardation.

This Conference deals with very practical problems which face those who work with the mentally retarded. It is very definitely not a theoretical meeting. The suggestions and recommendations which will be made as the result of your deliberations should be expressed specifically toward practical advice for those on the job of bringing out the full potentials of retarded children.

Our indebtedness to the National Institute of Mental Health for its support of this Conference and to the New Jersey Department of Institutions and Agencies for its cooperation in developing it, is indeed great, as is that to all of you present who have thus signified your willingness to give of your time and talents to attempt to show how to solve many of the practical problems of coordinating and integrating services dealing with the mentally retarded.

In particular we want to express our thanks to:

Harry J. McNeill, Regional Director, National Institute of Mental Health, and Dr. Maurice G. Kott, Chief, Bureau of Mental Deficiency, New Jersey Department of Institutions and Agencies.

With this I leave you to open this Conference, expressing our best wishes for a very successful meeting and full confidence that what results from it will penetrate into the daily endeavors of workers wherever the mentally retarded are concerned.

NOTE:

The reports that follow attempt to capture the salient points and conclusions derived from the Conference in synopsis form, as opposed to professional abstraction. Reviewed are the two LECTURES; the two PANEL SESSIONS, (each of which included one resource person from the professions of management, psychiatry, psychology, social work, medicine, education, and speech-hearing); and the two WORKSHOPS. (Each workshop was composed of seven sub-workshops of the professions represented, with resource persons as leaders, and participants to carry on discussion.

LECTURE . . .

"DIAGNOSIS . . . ORIGINAL and CONTINUING"

margaret j. giannini

Reviewed by Walter Jacob

Dr. Giannini described general ignorance of mental retardation in many fields which avoided inter-disciplinary approach to the problem. She stated that diagnosis is primarily a medical problem needing assistance from many allied disciplines.

Before any prescription can be made, we must know about the child's actual functioning level and his potentials interpreted as a physical, mental, social and emotional combination.

Diagnosis first lies in the clinician's ability to evaluate the child according to normal standards of development. Investigation pursues etiologic and pathologic classifications.

The physician plays the leading role in mental health so rapport must be developed between him and the family.

Key characteristics to be investigated in a deviant older child include hyperactivity, short attention span, reading problems, disturbed perceptual faculties, little or no rote memory, impulsivity, low frustration thresholds, emotional instability and lability, temper tantrums and aggravation and stress reactions. Many of these point to emotional disturbance without retardation but should be studied.

Diagnosis in early life is more difficult because of variations in the clinical syndromes and transitional character of existing symptoms. Often a non-medical person rather than the physician is the first to detect the symptoms. Nevertheless a complete interdisciplinary history and physical examination including laboratory work are basic to any diagnostic effort. X-rays of skull, old fractures, intracranial calcifications, and of long bones and wrists are useful. Pneumo- and electroencephalograms are usually helpful where indicated.

Probably the most difficult problems in differential diagnosis are those emotional disorders which simulate true mental retardation. Careful diagnosis may reveal many retardates who are actually schizophrenics or infantileautism cases.

Only in rare instances can mental retardation be helped by medical or surgical treatment. Parent guidance in the management of the retarded child is most important.

Dr. Giannini reviewed several entities where medical treatment is indicated such as in phenylpyruvic oligophrenia, galactosemia, and in emotional disturbances. Surgery, before six months of age, is indicated in craniostenosis.

Ultimately the answer to mental retardation lies in prevention, achievable only through basic and applied research.

PANEL . . .

"THE COLLECTION OF INFORMATION"

french (management)	glaser (medicine)
stevenson (psychiatry)	deprospo (education)
bice (psychology)	matthews (speech-hearing)
kelman (social work)	johnstone (moderator)

Reviewed by Harold A. Delp

The papers of panel members were distributed previous to the discussion session to be read in advance. At the meeting discussion began with each member being asked to expand on his key point to lay the groundwork for the panel discussion. This was followed by discussion among panel members and from the participants in the audience.

General discussion started by the statement of the chairman that what is needed is all kinds of information available which will give as complete a picture as possible about the individual. It should expound on what information each professional area needs from each other and why, and how this information may be most effectively utilized; i. e., by whom it may be weighed, analyzed, and coordinated so that all elements will come into proper focus.

The first point discussed was pointed to the need to clarify the areas necessary information. The staff should not be too concerned about which discipline furnishes the data. We should set up the minimum requirements to take care of a particular situation and then decide which members of the team are best qualified to do the various parts of collecting data and putting it together. Work with mentally retarded is not a task which the various disciplines can carry on in isolation. Rather, each is dependent on the others. In performing his own tasks each has to be aware of this dependence not only to take advantage of the others but also to tune his findings and reports to the needs of the others. A tremendous range of investigation is possible to enable everyone to carry on his part of the total task of diagnosis and program planning.

Many, if not most, of the mentally retarded are complex problems in terms of the retardation itself and especially as concerns the multiple handicaps often present. There is a serious need for much more than medical classification. Thus, even for diagnosis we need the maximum of information from all sources and from all professional areas. Some members felt that there is a practical limitation in the collection of information in terms of present day knowledge and needs.

One point of view emphasized was that the child must be kept in the foreground and the specialists in the background. In this approach it was suggested that keeping the child's anticipated problem and etiology in mind can control the information and history taking and thus eliminate unnecessary and spurious data. However, other members of the panel felt that the reverse should be used. If data taking is from a preconceived point of departure as concerns the child's problems, we are apt to miss important material when our previous assumptions are later proven wrong — which frequently happens. In addition added data often are needed later with the continuing problems which arise and which could not be anticipated in the original history and data collection. Some stated that we should be less concerned about getting too much information — usually we have much too little. There is more need for adequate and complete observation of the child in all situations, complete laboratory studies in addition to case history, and studies from all related areas such as education and speech.

Returning to the point that at times staff collect data that are not useful, the point was made that there should be a certain amount of selectivity to the collection data. The comment was made that perhaps other techniques might be used which would be less time consuming or less repetitious than some of the usual ones such as prolonged case history taking. It was further emphasized that, even in history taking, there are many situations in which each staff member feels obligated to do his own case work for fear someone else may omit something he needs, and hence the parent giving the data becomes worn out from the many times he must repeat the same information. It stated that each professional person finds certain tools which, for him, allow him to obtain maximum information. Interpretation of these data is the most important factor in their use. Hence, a large mass of tools such as intelligence tests is not needed in any particular case, in spite of the fact that some phychologists still feel the necessity to give several test batteries to an individual. Basically, the need is for the proper selection of the tools to be used in the individual case with the understanding that the specific tools must vary from case to case as the problems differ.

At this point in the discussion, the direction shifted to sources of information. It was stated that many have insisted that the mother is the primary source of data. Some felt that the father is too often neglected as a source of information while some felt that not only should mother and father each be interviewed separately but that they should be seen together. Some disagreement existed between the panel members at this point, with the opposite view that the father was much less often needed to secure adequate data. It was added that the interviewer should delineate the variables required in the case and bring the father in only when the information indicated that he would have something definite to add. It should not be a case of always including or excluding various members but rather to use a selective process depending on the needs of the case.

As a rebuttal to the last point, the comment was made that often it is not the verbal information or facts which are needed from both parents but the expression of individual and family attitudes which assist in understanding the child's problems and being able to offer the maximum benefits to the total situation. This was considered especially necessary when the problem included a level of emotional disturbance. In this case perhaps other members of the family would be critical to the adequate understanding of the total problem. Even factors about the community and the various sets of values present might at times be considered critical.

Expanding on this need to have both parents present, one panel member felt that he had found more fathers unwilling to come to grips with the problem of the child's handicaps. Often there has been little communication between the parents. The psychiatrist or psychologist (or other staff member) can help to conserve and strengthen home ties and home stability with both parents. Diagnosis and treatment are considered to be inseparable. The father should be used not only as a source of information and attitutes but also, since he is a part of the child's environment, he should be there as a part of the treatment planning.

The discussion closed on the point that data on the behavior of the child should come from whatever sources may be available — home, school, and other areas involved in the child's life. After all, we have a child with problems and we must start with the child himself.

LECTURE . . .

"RECOMMENDATIONS BY CLINICIANS" william p. hurder

Reviewed by Walter Jacob

Dr. Hurder began by questioning how prescribing and programming in the field of mental retardation differed from that in other fields and how barriers to such programming can be overcome. He described the difficulty of being specific when we deal with behavior, social life, and educational experiences. In many cases this aggravates the distance between the one who makes the recommendations and the one who carries them out.

He spoke of the lack of validity and precision of recommendations, the necessity of conveying recommendations in verbal form, the need of integrating recommendations from several sources into a manageable procedure, and the problems of reception, interpretation, and utilization of these prescriptions by the final recipient of them who is often unprepared by training to make the interpretation. Finally, the patient himself can give relatively little assistance in the matter.

Dr. Hurder pointed out that frequently the team evolves a program but there is no follow-up, or each member of the team carries out his own part of the recommendations, or a strong member may develop on the team who dominates the carrying out of the program.

Among positive efforts to improve procedures the following were mentioned: training of personnel in practical realities in all levels, extension courses to lay persons, and consultant efforts to those actually working with the children. Sources available to the patient should be known, recommendations made as clear as possible, and follow-up should be established.

The primary professional responsibility is to do research on the integrative program. We should train in teamwork and in honesty in our relations together.

WORKSHOP . . .

"INTERPRETING AND REPORTING INFORMATION TO USING PERSONNEL"

sub-workshop leaders:

dybwad (management)
jensen (psychiatry)
bice (psychology)
kelman (social work)
whitney (medicine)
stevens (education)
matthews (speech-hearing)

Reviewed by Seymour Rigrodsky

The seven workshops approached the problem of "Interpreting and Reporting Information to Using Personnel" within the framework of their own professional knowledge and interest. However, similar themes appeared and several points of agreement were reached among the workshops.

The need for a continual team approach for the adequate diagnosis and therapeutic disposition of the mentally retarded individual was a theme which appeared consistently throughout the discussions. Other topics centered about the unique contributions of the various professionals, the importance of being able to communicate information, the refinement of testing and training techniques, the continued need for research, and the vital importance of having well integrated and trained personnel servicing the mentally retarded.

A majority of the workshops agreed that "using personnel" should include all those who were involved in the daily training and management of the retarded, whether it be in the institutional setting or as advisors to home training programs.

The workshops concluded that it is of primary importance that each professional discipline make unique evaluations which would be presented and critically evaluated at staff conferences. Not one profession felt that they alone could solve the multitudinous problems of the training of the mentally retarded. It is imperative that each professional group contribute information which can be utilized in the planning of programs. The type of information that can be collected will depend upon the clinical setting and the participants involved in the examination regime. The areas that are necessary for determining the best possible training approach should be tested and evaluated. Quantitative test information as well as subjective behavior was a concern of all the professional sub-groups. During staff meetings each professional member should contribute the results of his test and observational protocols, and the entire staff would then decide the best possible course of action.

Implicit in this kind of approach is that communication is a "two-way" process. Although each professional member of the team would be contributing his own unique information, the interrelatedness of the material indicates that each member would depend on others to supplement his own testing program. To plan appropriate therapy and training programs, test information that has been received would have to be integrated and the individual would then be scheduled for a competent and well-planned program.

One difficulty in this method of reporting is the level and type of communication that is used in the reports. The various workshops agreed that the language content of the report should be geared to the kind of agency or individual who is to receive it. The use of technical language should also be guided by the recipient of the report. Each professional should present the interpretation of his test material in a form that would make it comprehensible to the other contributing members of the team. The validity and reliability of the test material would be the responsibility of the individual testers.

Many of the workshops urged that evaluations be a continuing procedure and that periodic evaluations are necessary. Recommendations should be made and carried out in the light of existing circumstances.

The various workshops represented at this conference felt that each had a contribution to make, and some workshops recommended that if it was necessary, other disciplines should be made available. The workshop on Medicine thought that the dentist could make a valuable contribution, and the workshop on Psychiatry believed that a Public Health Nurse could be helpful.

It appeared that each workshop unit was concerned with the need for the development of more useful and refined diagnostic instruments. These procedures and tests should prove more useful for prognostic and evaluational purposes. In addition to more refined instruments than are now available, a need was expressed for more specificity of the areas to be examined within each professional category.

For institutional personnel, in-service programs were urged to better facilitate the imparting of knowledg to using personnel. Through these programs better understanding of the retarded individual can result. Some workshops stressed that these programs be established for the various educational and occupational interests of the personnel involved.

The members of the conference noted that meetings and workshops of the type just concluded, in which various professionals who are interested in the welfare and training of the retarded have an opportunity to exchange thoughts and ideas, was of great benefit to all those involved.

WORKSHOP . . .

"APPLICATION OF RECOMMENDATIONS"

sub-workshop leaders: begab (social work)
french (management) glaser (medicine)
stevenson (psychiatry) deprospo (education)
michal-smith (psychology) schlanger (speech-hearing)

Reviewed by Bernard F. Niehm

The workshop was sub-divided into seven sub-workshop groups representing the various disciplines usually considered vital in the team or clinical approach to the diagnosis, treatment, training and management of the mentally retarded. The seven sub-divisions, management (daily care), psychiatry, psychology, social work, medicine, education and speech-hearing, were instructed to consider their role in the "application of recommendations." Although each sub-workshop met independently and without any common pre-arranged set of questions or problems to discuss many of the groups came up with similar problems and answers. In this summary we will state some of the problems that seem to be of concern to the majority of the disciplines.

Considerable attention was directed to discussion as to who is best qualified to administer an institution for the retarded under the operation of the team approach. States and local communities differ in the laws and customs which dictate who is to be superintendent of an institution. Technical preparation, prestige, personality factors, ability to motivate others would all have a bearing on the efficiency of the administrator, but defining the ideal person would be difficult. It was pointed out that while a medical director is used in some institutions, the multiple discipline approach might well call for non-medical supervision.

Perhaps of greater significance in the diagnosis, care and treatment of the retarded is not in who should direct the institution or the team but the effective working relationship of the team members. The importance of each discipline to define and observe clearly its own and each others area of major competence was deemed important by the workshop groups. In the team approach the major responsibility for providing program recommendations is with the multi-disciplinary team and the actual carry out of the recommendations within the realm of the individual disciplines.

The chairman or coordinator can be from any of the team disciplines but should possess a knowledge of what each discipline can contribute to the care and treatment of the child. It was pointed out that each team member or discipline must be prepared to relinguish control or to take up the responsibility for a particular phase of treatment or program.

Definition of "using pesonnel" in the application of recommendations was interpreted by some to mean personnel directly responsible for daily care of the child, this being the house parent or parents in a residential setting. Other groups were of the opinion that "using personnel" would include any discipline or member using information compiled by other disciplines.

It was pointed out that recommendations must be practical, realistic and within limits which can be followed. Recommendations must be adapted to fit existing conditions and it will be necessary for various members of the team to bring the recommendations to the attention of using personnel directly involved with the child. Records are only of value when used and must be properly interpreted. We should avoid putting labels on children as labels are inclined to emphasize what the child cannot do in the recommendations.

Responsibility of the supervisory personnel was given considerable attention. They are responsible for taking information collected from other disciplines and of culling this information for specific details that will be helpful to direct using personnel (teachers, daily care personnel). He must know what information is important and necessary. The supervisory personnel must be able to properly interpret information to using personnel directly involved with the child. The using personnel might be house parents, teachers, etc. Technical terminology should be used only when necessary. Greater standardization of reports was suggested with greater care used to see that recommendations made during evaluations be carried forth. It was agreed that inadequate follow-through of recommendations might cause serious breakdown of therapeutic and education programs.

Information from the various disciplines must be available to all other disciplines. Avenues of communication must be set up among the disciplines whether it be in the community or residential setting. Application of recommendations was discussed as being a two way communication. Each discipline giving recommendations to be applied by others and recommendations from other disciplines being received. The amount and type of information one is able to get from other disciplines in terms of reasonableness and practibility will depend on type of school or community resources, budgetary provisions, personnel, etc.

The question of intake of information to be used also depends upon many factors. Ideally, intake might be done by the social worker. In the case

of no social worker or in the residential school each team member will have the responsibility of collecting certain information for team use.

In-service training was considered important. A big problem among professional and non-professional groups working with the mentally retarded is their lack of information concerning the problem of retardation. Of equal importance is the need for all daily care, nurses, supervisory staff to be familiar with the responsibilities of other staff members and how it ties in with their work.

Counselling of parents was also considered a major problem by many workshop groups. The counselling and reporting of information to parents should be a function of the professional groups. Even then the counselling should be done by the specialist concerned with the specific type of problem. There has been the tendency of disciplines to move into other areas at times. Although counselling should not be a function of daily care staff, it is necessary that daily care staff be adequately instructed in a diplomatic approach to parents and the information they are qualified to discuss with parents (eating habits, habits of sleep, clothing and program). General economic and social upgrading of cottage positions would help institutions to attract better qualified cottage personnel.

Greater research is needed to (1) make future reports and recommendations more useful and meaningful to the "using personnel," (2) improve communication between the various disciplines and between supervisors and personnel directly involved with care, treatment or training of the child, and (3) improve on methods of follow-up.

As noted throughout this report the team approach, application and adaptation of recommendations, responsibility of supervisory personnel, using personnel, counselling with parents, communication between disciplines and research in ways of improving reports and recommendations so they will have greater functional value, have been the major points of concern in most of the sub-workshop groups.

The purpose of this summary has not been to cover all the problems but merely some of the highlights. Full reports of each sub-workshop area will be published in the full proceedings of the Spring Conference Report.

PANEL . . .

"THE TEAM APPROACH TO CLASSIFICATION AND PROGRAMMING"

dybwad (management) — whitney (medicine)
jensen (psychiatry) — stevens (education)
michal-smith (psychology) — schlanger (speech-hearing)
begab (social work) — kott (moderator)

Reviewed by Johs. Clausen

The main concern of this summary is the discussion of procedures and techniques in the team approach to classification and programming. No attempt is being made to review all the various ideas contained in the seven papers. As some of the authors have discussed procedures and techniques more fully than others, some of the authors have been quoted more often than others.

There is complete agreement among the seven contributors that the team approach is superior to the unilateral approach of a single discipline. The argument, as expressed by Michal-Smith, is the obscurities and complexities of the problem and the increased specialization of the disciplines. Also, each of the authors makes the statement that his disciplines has something to contribute to classification and programming for the mentally retarded.

A thought which has been expressed repeatedly is that an integrated team can only function if each member has an understanding of the other disciplines' areas of responsibility. Practically every contributor has outlines in some details the area of competence and frame of reference of their own discipline. These accounts are important and interesting but since they do not deal with procedures and techniques in a direct way, they will not be reviewed in detail.

The picture of a functioning team which emerge from the seven papers may be summarized as follows: The basic team would consist of four members, who are in regular, committed contact with the case, physician, psychologist, social worker and educator. On the consultant level one would have related specialists in each field, varying according to the requirements of the problem under consideration. It is extremely important that the team function with regularity and consistency. The team must maintain continuous

contact with the patient and with each other. As new problems are presented the role of each member will shift accordingly, taking on differing relative importance and becoming, at one time or other, the crucial one.

A true concept of the team concept would mean that each individual member, no matter how capable and well informed, should maintain clinical attitudes throughout and allow others who are, by training, qualified to perform those specific services on a more professional basis than himself even though he may feel reluctant to give up his felt responsibilities or opinions in the matter.

The greatest possibilities of effectiveness for the team approach lie in the acceptance and validity of the team concept by its members — in the willingness to exchange ideas and responsibilities, for each to have confidence in himself combined with respect for others.

The majority of the contributors discussed the problem of leadership of the team. It was agreed that leadership is necessary but there was no agreement about how the leader should be selected. Medicine claims leadership on the grounds that mental retardation primarily is a medical problem. The other disciplines announced their candidacy for leadership with the argument that the nature of the problem, following diagnosis, frequently is non-medical. This controversy, of some standing, was not resolved at this conference. To illustrate the prevalent trend Begab pointed out that in the current legislation of many states the medical profession is given primary or sole responsibility for the determination of mental retardation and need for institutional care. Courts, however, frequently do not limit themselves to the letter of the law and look to the psychologist and social worker for fuller understanding of the individual's condition and needs. Legislation and admission procedures in all states might well be amended to include psychological and social as well as medical evaluation.

On the problem of leadership, a suggestion by Michal-Smith is of special interest. He proposes a team with a co-ordinator and a leader. The choice of co-ordinator may depend upon the requirements of the specific setting in question. The co-ordinator should remain as the continuing pivot for a definite period in the developmental history of the child. The leadership of the team, however, may be variable. We may be able to consider the possibility of team relays, with the coordinator as a fixed entity and the leadership varying with the specific stage of investigation. For example, at the stage of diagnosis, the leadership may be placed in the hands of the physician. As we attempt to apply the diagnostic findings, the leadership role may more properly belong to the educator or therapist. It is the duty of the coordinator to set realistic schedules for service and to see that they are followed; it is the duty of leadership to select what services are called for in the maximum interest of the child at the given time.

Several of the contributors discussed briefly the inclusion of parents on the team.

The question was raised by Dybwad whether it is possible at this point to give a precise description of the areas of responsibility , "to define occupational image," for those who are in charge of the daily care of the children. He asked whether the present social structure actually leaves room for the practical application of our theoretical team concepts. Do we know enough to produce team action when the participants show as wide a range of background, status and motivation as one encounter among those concerned with the daily care and management in our facilities for the mentally retarded?

To the reviewer, Dybwad's remarks pinpoint one of the most crucial problems in the team approach. It has been stated that the team should comprise people who are in closest contact with the child. This would mean a practical housemother, a particular teacher, a particular clinical psychologist, etc. In this way we would have teams which would not have the desired stability, and may not take advantage of the best insight available. If one emphasizes insight, the team would probably include the cottage supervisor, the school principal, the chief psychologist, etc., i.e., people who are not in daily contact with the children. A team which would include the whole staff would be an unmanageable monstrosity. Is it possible that the solution is in co-existing teams at various levels? If so, one is presented with the problem of relationship between the various teams and the line of communication between them. A further attempt to discuss the team approach may include this problem.

SYMPOSIUM . . .

RESEARCH FOCI IN THE PSYCHOLOGICAL STUDY OF THE MENTALLY RETARDED

(presented at annual meeting of the Eastern Psychological Association, April 4, 1959, at Atlantic City, New Jersey.)

SYMPOSIUM . . .

INTRODUCTORY COMMENTS

anne m. ritter

When the proposal for this symposium was submitted to the program committee of the Eastern Psychological Association, my initial inclination was to title it "The New Look in Mental Retardation" out of respect to the recently heightened interest in the expansion of treatment and research facilities and activities. To a considerable extent, however, these developments represent a renewed, rather than a new, recognition of the importance of this area. We need only recall the work of Itard, Seguin, Goddard, Fernald, and Binet to remind us of the positive orientation and diverse interests of these pioneers; their contribution of experimental, socio-clinical, educational, and measurement studies give to amentia a long and respected history. Nevertheless, during the last 30-odd years, it came to be viewed as a "low status" area by so many psychologists and also my colleagues in related disciplines. The prevalent belief was that those who specialized in the study of or the treatment of the mentally subnormal could do little more than participate in custodial care, administer some variety of psychometric test, or take on some other routine assignments. Since there was presumably no need or opportunity for initiative or creativity, the psychologist or other specialist eventually was placed as low on the totem pole professionally as his patient was intellectually. Unfortunately these notions have not been as completely abandoned as they might be. We can, on occasion, perhaps help reorient some of our colleagues by reminding them that work with the retarded certainly did not stifle Binet's creativity. In fact, it was the very existence of the retarded and the educational problem they presented that provided the impetus for the design of a technique which evolved first into the Binet-Simon Intelligence Scale (Binet, Simon, 1916). After World War I and on into the thirties there was the extensive research involved in the standardization of the Stanford-Binet (1937 Revision) by Terman and Merrill (1937). These studies as well as those concerned with the heredity-environment controversy added to the available retardation data. These data, however, were essentially a by-product of other concerns and thus of limited relevance to practical or theoretical problems of amentia. During the thirties and forties studies of the mentally retarded themselves focused primarily on the adequacy of the social and economic adjustment of those released from institutions as well as on vocational possibilities.

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It is only within the last few years, however, that research and treatment of much broader scope were instituted. Many recent writers, without always quoting the source have given emphasis to an idea suggested some 1900 years ago by Plutarch to the effect that to create harmony, music must investigate discord and to produce health, medicine has to examine disease [Lives. (Detetrius), p. 1073] Various paraphrasings of this thought which appear in the current literature reflect the growing recognition that research on impaired intellectual and social functioning can further our knowledge of normal intelligence, of learning, of perceptuo-motor skills, of personality development, and can also contribute to the development of theory. This hypothesis has been recognized and accepted for many years relative to research and treatment of the emotionally disturbed. We might assume that delayed recognition of the pertinence of this same hypothesis to the study of the intellectually retarded can be related to the minimal amount of amentia research that had been in process. It might be of interest sometime to consider what factors led to and re-enforced the general devaluation of research and treatment in this area.

Whatever these factors may be, we do know that only recently have a still small, but increasing number of psychologists and colleagues in related disciplines, given behavioral recognition to the fact that mental retardation, as an area, and the retardate, as an individual, are both worthy and needful of investigation in their own right — as well as in terms of the various contributions which can stem from such research.

The expansion of research and service into previously ignored areas is reflected in the greater diversification of problems and more extensive time allotted to mental deficiency at our professional meetings over the past 10 years. Thus, in 1948, one paper on education of the mentally deficient was included in the program of the APA meeting but none at any of the regional meetings. In 1953, there were four such papers and by last year, a total of nine individual studies, two symposia, and one workshop on mental retardation research were included in the programs of APA and of five regional meetings. In addition to education and discrimination learning, the subject matter included social adequacy, perception and concept formation, plus the parent counseling and current research symposia. This increase cannot be attributed to the increased number of papers; in 1953 the ratio of mental retardation to other papers was approximately 1:200; last year it was 1:100.

Time at the moment is insufficient to go into these various factors which give impetus to the current resurgence of interest and activity in treatment and research. They will, to some extent, be indicated by the speakers, since the topics to be covered do encompass some of the major aspects of on-going programs. Very briefly, these include:

1. Recognition of the fact that effective communication, treatment and research as well as efficient institutional administration require the des-

ignation of uniform, standard definitions of mental deficiency which can be used by all disciplines involved in diagnosis, care and research. In setting up such definitions, problems arise as to whether they should be based upon etiologic factors, learning ability, social adaptivity, or some other dimension(s); there is also concern about how much precise detailing is necessary within each category. One approach to this problem will be presented by Dr. Thomas L. McCulloch, a past president of the A.A.M.D., who is currently Associate Research Scientist at Letchworth Village and also a participant in the Technical Planning Project of the A.A.M.D. on just this issue; his report is entitled "Problems in Psychological Classification in Mental Retardation".[1]

2. An account of the use of psychological methods in the study of the sensory and motor development of the defective to be presented by Dr. John Clausen, Chief of Psychological Research at the Training School at Vineland. At the present time little is known of the levels and patterning of these skills — individually or in combination. An eventually practical consequence of such research is that independently and/or in conjunction with IQ, knowledge of the individual's sensori-motor skills may well provide a constructive base for the development of realistic diagnostic and rehabilitative programs. Since mental deficiency is a public health problem which has already assumed major proportions and which is expected to increase with the greater longevity associated with progress in medical care, there is an increasing need for successful remediative procedures. Such remediation could serve not only to lessen the financial and social drain on society but also to give meaning and direction to the individual retardate's life.

3. Studies of the process and patterns of learning by the retarded may also have high relevance in remediation plans, in modification of educational procedures and goals, and/or may compose a seriesofsystematic investigations oriented towards the development of learning theory. The latter is the primary interest of Drs. Betty House and David A. Zeaman, both of whom are on the Psychology Department staff of University of Connecticut, Dr. House as a Research Associate and Dr. Zeaman as Associate Professor. Their research, carried out at the Mansfield State Training School, is supported by a grant from the National Institute for Mental Health. The trainable retardates compose the samples for their investigations of various visual discrimination tasks, free operant conditioning, and arithmetic training by machine.

4. Today no symposium on current research would be complete without attention to the retarded person as a social being. Historically, interest in the psycho-social development and functioning of the mentally retarded goes back at least 150 years to the work of Itard. In various published works

1. This paper is not included here at the request of the author who feels that its publication would be more appropriate subsequent to the appearance of the report by the A. A. M. D. Project on Technical Planning in Mental Retardation.

of more recent date, the particular importance of the social competence of the retarded has been stressed, but little has been done to determine the antecedents or concomitants of the development and maintenance of such competence. Investigations carried on during the past 15 years concerning the impact of a retarded child on the family was, perhaps, a move in this direction. But only recently has cognizance again been taken of the fact that the retarded person — child or adult — is an active participant in his environment, affected by as well as affecting those in his social milieu.

Recognition of this interaction between parent and child and its effect on the social, intellectual, and affect development of the child is the focal point of the research program at the Kennedy Child Study Center. The basic orientation and organization of this Center derives from that of the Astor Home for Children where cooperative multidisciplinary teamwork, as well as the integration of service and research activities, is not a fanciful will o' the wisp but an achieved reality. As both Director of Research and Psychological Services at the Astor Home for Children and Chairman of the Research Committee at the Kennedy Child Study Center, Dr. Ralph W. Colvin, in his paper, will present both the essentials of the research plans at the Kennedy Child Study Center and some of the philosophical and practical considerations attendant upon the organization and growth of such an integrated program as has been achieved at the Astor Home for Children.

5. And finally, as discussant, we shall hear from Dr. Mortimer Garrison, Jr., who, as Research Consultant in Mental Retardation to the U. S. Children's Bureau of the Department of Health, Education, and Welfare has been in close touch with the various developments in this area, and so is in a most strategic position to elaborate and tie together the more salient points included in the individual papers and to give us a broader overview of the current status of mental retardation research.

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PATTERNS OF SENSORI-MOTOR SKILLS IN RETARDATES

johs. clausen

It was with considerable hesitation that I accepted Dr. Ritter's invitation to participate in this symposium. The reason for hesitating was that I have no data to present, no findings to report. The only thing I can do is give a sketchy description of a research project which is in progress at our laboratory. This project is planned to span over a period of five years and is supported by a grant from Public Health Service. We have just started our third project year. The title of the project is "Ability Structure and its Development in the Mentally Retarded." The project is a result of dissatisfaction with current etiological classification. Particularly, we have reservations with regard to the homogeniety of the group called "organics." For one who thinks that a large portion of the mentally retarded children afford an excellent, but neglected, opportunity to study brain functioning and metabolic dysfunctioning this group of organics can stand some refinement. Ours is primarily an effort to define subgroups of the mentally retarded, based on ability structure — patterns of impaired and intact functions — rather than medical and family histories. Our orientation is such that we have emphasized those basic functions which we think underlie intelligent behavior, and have excluded from our battery tests which are concerned with personality characteristics or emotional behavior. This does not mean that we underestimate the importance of emotional factors, but that we have more confidence in the measuring techniques of those functions which are being recorded in our test battery.

We have set up a test battery which for the purpose of this description may be divided into the categories of sensory, motor, perceptual and complex mental functions. The complex mental functions are only lightly represented in the battery. In the categories of motor and perceptual functions we have included tasks of different complexity so that a hierarchy of complexities emerges in these two areas. The purpose is to find whether or not a breakdown occurs when a task requires increasing degree of interaction of the more basic functions. The battery consists of 34 different tests, yielding a total of about 100 scores. One of our immediate tasks is to reduce the number of scores before we start our final anaylsis. It takes us 12-15 hours to administer the battery and this is accomplished in as many test sessions, spread over a period of 6 to 7 weeks. In addition to the test results, we have information about family and medical histories of the subject from his record, and at the time of the project testing the subjects are given a standard neurological examination and EEG.

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In order to give you some impression of the functions we are recording, the 34 tests of the battery are listed in Table 1. Most of these tests are

Table 1

Test Battery Used in the Ability Structure Project
The Training School at Vineland, New Jersey

1. Hand-Eye Dominance
2. Grip
3. Lower Arm Movement
4. Tapping
5. Simple Visual Reaction Time
6. Simple Auditory Reaction Time
7. Auditory Choice Reaction Time
8. Purdue Pegboard
9. Hand Precision
10. Mirror Drawing
11. Rail Walking
12. Ataxiometry
13. Visual Acuity (Orthorater)
14. Perimetry
15. Audiometry
16. Two Point Threshold
17. Kinesthesis
18. Critical Flicker Fusion
19. Threshold for Hearing of Speech
20. Interval Estimation
21. Stereognosis
22. Brightness Discrimination
23. Span of Apprehension
24. Scrambled Foreperiod Reaction Time
25. Recognition of Non-Meaningful Material
26. Identification Threshold
27. Reaction Time to Pictures
28. Word Association
29. Azimuthal Perception
30. Muller-Lyer Illusion
31. Weight-Size Illusion
32. Porteus Mazes
33. Raven Matrices
34. Primary Mental Abilities

familiar so I shall limit my comments to a few of them. Lower Arm Movement (No. 3) is designed to be a relatively pure measure of speed. The subject is asked to touch with his hand two metal plates on a board in succession. Touching the first plate starts a timer, and touching the second one stops the timer. Essential in the test is that the subject himself decides when the movement is to be executed. Most psychomotor tests are limited to finger dexterity or hand movement. We have included Railwalking (No. 11) so we may get a measure which reflects gross body movement. Ataxiometry (No. 12) measures body sway in two planes when the subject is standing on the floor with his feet together and is blindfolded. The Orthorater test for visual acuity (No. 13) and the Perimetry test for visual fields (No. 14) are both tests we have had some difficulties with. Some of our subjects do not have the concept of direction which is necessary to identify the checkerboard in the Orthorater, and it seems a difficult task for many of them to focus on the fixation point of the perimeter while observing the test target in the periphery. It takes considerable patience, persistence and checking to obtain a reliable two point threshold (No. 16) but in most cases it is possible to do so.

In the test of Kinesthesis (No. 17) the blindfolded subject is placing one hand in a fixed position on a horizontal bar extending out in front of him. He is asked to slide his other hand along another horizontal bar, parallel with the first, starting from extreme in or out position, until corresponding positions of the two hands are attained.

In CFF determination (No. 18) as well as in Brightness Discrimination (No. 22) and Muller Lyer (No. 30) we have found it better to avoid continually changing stimuli. With these three tests we are using fixed steps of increment or decrement so that the subject is always making a judgment about a fixed situation.

Interval Estimation (No. 20) is recorded by having the subject reproduce a time interval which is demonstrated by a buzzer method of reproduction.

For the test of Stereognosis (No. 21) we prepared two sets of wooden blocks, regular as well as irregular shapes. One block is presented to the subject behind a screen where it may be felt and handled but not seen. The other block is presented visually on a board with several other blocks. The task is to point to the block on the board which is identical in shape to the one he is handling behind the screen. The purpose of this arrangement is to make the test free from a verbal component.

Scrambled Foreperiod Reaction Time (No. 24) is included in an attempt to record sustained attention. The foreperiod varies from 1 to 14 seconds in random order, and the score is the difference between this reaction time and the simple visual reaction time with standard foreperiod.

Recognition of Non-Meaningful Material (No. 25) is a tachistoscopical presentation of a geometric figure or a pattern. Immediately after presentation the subject is showed a card with four figures and he is asked to point to the one he saw. There are 24 items in the series. Identification Threshold (No. 26) is recorded by tachiscopical presentation of a picture of a familiar object. Starting at subliminal values, the exposure time is increased in steps of 5 ms. until the object is recognized. In this series there are 11 pictures.

Reaction Time to Pictures (No. 27). Here a picture of a familiar object is shown and the subject is asked to name it as fast as possible. Word Association (No. 28) in similar fashion stresses verbal fluency. From a standard word list we have omitted all so called emotional words. Whereas we record the response time as well as response word, for the immediate purpose of this project we are only planning to utilize the time score.

Azimuthal Perception (No. 29) is tachistoscopical presentation of a line deviating from 18 to 72° from the vertical and the subject is asked to indicate the position of the line by marking a grid.

We do not claim that our present test battery is exhaustive or the most representative one. The selection of tests were made on the basis of simplicity of the task and a reasonable distribution among the four categories that was mentioned above. It is expected that we can dispense with some of the 100 test scores, but it is entirely possible that the present study may indicate some tests which should have been included in the battery.

It took some time to develop the test battery. The problem, of course, was to find procedures which were adequate for our subjects and formulate instructions they were able to grasp. We utilized a pilot group of about 30 subjects for this purpose. The importance of complete data for all the subjects in our study may easily be appreciated. We feel we have been rather successful in developing an adequate test battery. To date we have completed about 200 subjects.

The proposed test population includes three different age groups of 100 subjects each. The chronological age of the youngest group is 8-10 years, of the intermediate group 12-15 and of the oldest group 20-24 years. The IQ of the retarded subjects is in the 50-75 range. In all three age groups we are trying to have all categories of current etiology groupings represented. In addition to the retarded subjects we are planning to include 100 normal subjects, mean IQ 100, chronological age 8-10. This group matches the younger retarded group in CA, and will match the intermediate retarded group in MA.

At this point it would have been natural to specify the hypotheses we have stated for our study. Because of the limited space I prefer to give an outline of the statistical procedures we are planning to employ. The first step in the analysis will consist of computing descriptive statistics on all measures for all groups. Any scaling problems which occur should be dealt with at this point. Next the relationship between the scores on the ability measures themselves and between these variables and chronological and mental age, will be investigated within all groups. Then tests for the differences between current etiological groupings will be carried out for each of the measures. By intercorrelating the subjects of each age group and by factoring the resulting matrices of intercorrelations between these individuals, the Q-technique, an attempt will be made to define subgroups which behaviorally are more homogeneous than those provided by current classification systems. The relationship between these behavioral groupings and traditional etiological groupings will be evaluated by chi-square test. By using traditional factor analysis and other procedures we will try to reduce the number of tests in the battery while maintaining discriminating power. Tests for the difference between groups which evolve from neurological examination and EEG will be carried out for each of the measures.

In a successive project we hope to be able to retest some of our subjects with the same battery after a lapse of 3-4 years in an effort to study the development of the functions, or constellation of functions, measured by our tests.

In that we limited our test population to certain age ranges and certain IQ levels, and in that we wanted all current etiological groupings represented, we could not find a sufficient number of subjects in our own population. In turning to New Jersey State institutions, such as the Johnstone Research and Training Center at Bordentown and New Lisbon Training School, with a request to include part of their population in our study, we have been met with the most generous cooperation. We are sincerely appreciative of the attitude of the New Jersey State officials and the administration of the particular institutions.

I am afraid that my story would have to come to a halt at this point. Not only because the time is up, but because this is as far as we have gotten. In three years from now we should be able to report some of our findings.

DISCRIMINATION LEARNING IN RETARDATES[1]

d. zeaman

Synopsis

The moderately retarded, trainable child is particularly slow in forming new visual habits, even slower than would be predicted from a low mental age. A number of experimental analyses have been made of the rates at which imbecile children with mental ages between two and six years can be trained to make visual discriminations. The results are consistent with a theory of attention, which holds that these institutionalized subjects are not as much retarded in learning ability, per se, as they are in ability to direct and maintain attention to important features of the environment.

Several special training techniques tried at our Mansfield State Training School psychological laboratory have been found useful in compensating for this attention deficit. Experiments have shown that the attention of the moderately retarded child can be successfully engineered by use of novel-looking stimuli and easy-to-hard sequences of discrimination tasks.

Evidence for a Discrimination Learning Deficit

A two-choice visual discrimination learning experiment can be disguised as a candy-finding game for our low-level subjects, a technique that resembles Harlow's method of testing primate learning (Harlow, 1945). In this game, a subject must learn under which of two objects a piece of candy is regularly hidden by the experimenter. When the two stimulus objects differ in color and form only, imbecile children with MA's between 2 and 4½ yrs., learn to solve the problem much more slowly than naive monkeys (Harlow, 1945; House, Zeaman, 1958), a surprising result in view of the fact that normal children in this MA range have been found at least the equal of primates in visual discrimination learning (Gellerman 1933; Hayes, 1953; Weinstein, 1941.) This leads to the expectation that young imbeciles would be surpassed in discrimination performance by normal children of matched mental ages. An experimental check on this expectation revealed that normal children of MA 4½ yrs. learned the same color-form discrimination significantly faster than retardates of equal MA (House, Zeaman, 1958). Similar results have been found for defectives at a higher MA level (Stevenson, Iscoe, 1955.)

This modest assemblage of comparisons, in conjunction with the absolute slowness of retardate learning (over 100 trials for the median subject) constitutes our evidence for a discrimination learning deficit.

1. The substance of a paper by D. Zeaman and B. J. House read by D. Zeaman.

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Unlikely Sources of the Deficit

We do not believe the deficit is attributable to any non-task-specific conditions such as motivation, emotion, memory, or understanding of the rules of the game. This conclusion is based on the fact that apparently small changes in the nature of the stimuli eliminate the deficit. If the simple objects, differing only in color and form are replaced by more complex "junk" objects (those differing in many respects, *e. g.*, a red plastic soap dish and an aluminum pot cover), learning occurs rapidly in almost all subjects (Zeaman, House, 1957). Unless there is assumed a complex interaction between task difficulty and motivation, emotion, and understanding of the rules of the game, these factors are ruled out. It is also our subjective impression that these children are highly motivated to get the candy and to please the experimenter, that they enjoy pleasant rather than disruptive emotions while playing, and that, finally, they know the rules of the game even when they do not know the solution. Memory is ruled out as a source of deficit by the fact that they do not reach a level of performance on one day and then slip back at the beginning of the next day's session. Once they hit criterion, they tend to hold it.

A Possible Source of Deficit

Logically it is known that the 2-choice discrimination can be solved either by approaching the positive stimulus, or avoiding the negative, (or both). Is the imbecile handicapped because he uses only one of these? A number of existing experimental techniques can be used to measure the relative strengths of approach and avoidance tendencies, and we have done a small series of analytic experiments (House, Orlando, Zeaman, 1957; House Zeaman, 1957; House, Zeaman, 1958) using such techniques. The basic strategy in all of them is simple. The experimenter disturbs in some way either the positive or negative stimulus, and measures the corresponding disturbance in discrimination performance in order to infer the extent to which each stimulus was used. Most of our results are not inconsistent with the view that although both stimuli are used, the young imbecile is weak in avoidance, or ability to handle information from the negative cue, — or learning what *not* to do. Even more broadly speaking: weak in inhibitory processes.

Since the data in support of this interpretation are as yet more properly classified as suggestive rather than convincing, we omit a review of the evidence and leave only this tentative conclusion to be regarded as an "amiable hypothesis" worthy of further test.

A Likely Source of Deficit

If young imbeciles were deficient in their ability to direct and maintain their attention to the relevant dimensions of the problem stimuli (those correlated with reward), then many otherwise puzzling aspects of their visual discrimination learning data could be more readily understood.

One clue leading to this theory comes from inspection of the shapes of discrimination learning curves. It has been noted that wide individual differences exist in the number of training trials necessary to bring our subjects to criterion in discriminating objects differing in just color and form. The learning curves for the fast learners (less than 25 trials) are fast rising, negatively accelerated functions. These contrast with the learning curves of the slow learners (more than 150 trials) which are ogival or S-shaped. Learners of intermediate slowness also displayed S-shaped functions. Despite these differences, a common feature emerges. Once these functions get above the chance level, they all proceed at the same rate. The difference between fast and slow learning is not the rate at which learning takes place *once it starts,* but rather the number of trials for learning to start.

During the initial, flat, chance-level stages of the performance curves, we infer some state or process *a*) which provides a necessary condition for discrimination learning, *b*) in which wide individual differences exist and *c*) in which our average imbecile subject exhibits a marked deficit. Attention is a process which may have these properties. Attention, these days, is likely to be called "acquired distinctiveness of cues" (Lawrence, F. H., 1949) or "learning to functionally isolate the relevant dimensions of stimuli" (Lawrence, D. H., 1952) or the "acquisition of observing responses" (Wyckoff, 1952) or the "formation of specific vigilance reactions" (Boguslavsky, 1955). These theoretical processes may not be logically identical, but they do appear to have one common component: they precede and facilitate efficient discrimination learning. In brief, attention comes before and helps learning.

Our inference of attention deficit is weak, unless having made it we are directed toward certain classes of controlling variables rather than others, and it is then found that these are indeed effective in changing behavior in a desired direction. Broadly speaking, the inference of attention-deficit leads us first to manipulate *stimulus* factors, rather than, say, response, motivation, or reward variables, to bring about more efficient discrimination. Several strategies for capturing attention have been found, two of which, involving stimulus factors, will be described.

Controlling Attention

Novelty is a stimulus attribute which for low level retardates has strong attention-getting properties. Harnessing this fact to help discrimination learning has been demonstrated experimentally (Zeaman, House, 1958) in the following way. Several subjects were found who had been failing on a color-form discrimination for over 200 trials. The choice situation was changed by replacing the original positive stimulus with a completely *novel* stimulus, presented simultaneously with the old negative cue. The result was rather dramatically sudden learning of the new problem. The same effect was observed when for other failing subjects, a novel *negative* stimulus was

presented in conjunction with the old positive cue. Results of this kind are difficult to handle in traditional learning theory terms, but they can easily be made logical children of theories of attention.

Another quite different strategy for capturing attention requires use of an easy-to-hard sequence of problems. It has been shown with both rats (Lawrence, D. H., 1952) and adult humans (Baker, Osgood, 1954) that difficult discriminations can sometimes be learned quickly if training is first given with easier stimuli having some of the same discriminable features as the more difficult stimuli.

Simple explanations of easy-to-hard transfer in terms of existing theories of stimulus generalization have been ruled out, (Lawrence, D. H., 1955). Appeal can, however, be made to mediating processes such as attention. Successful training on the easy problem requires that attention be directed toward the relevant cue dimensions. Then, when the problem is changed to harder but similar stimuli, one of the necessary conditions for discrimination of the hard stimuli — attention to them — is already present through transfer. The expected result is facilitation of the hard discrimination.

Operation of this principle in retardate learning can be seen in the following experiment (House, Zeaman, 1957). Training was given one group of our retardates on a color-form *pattern* discrimination. "Pattern" refers to a type of visual display — flat forms painted on a background surface, rather than three dimensional objects — which is so difficult for our subjects that few of them solve the discrimination even after prolonged training. A pattern discrimination can be made easy if it is approached through the corresponding, but easier, *object* discrimination (one in which the colors and forms are identical to those of the pattern, but three dimensional). To show this, a second group of subjects, matched to the "Pattern" group, received training on a corresponding object discrimination until solution was reached, and was then changed to the pattern discrimination. The results were gratifying: high positive transfer, with consequent solution of the pattern discrimination.

A third group was also trained first on color-form object discrimination before being switched to pattern, but for this group, the colors and forms were different from those of the patterns. Significant transfer (but not as great as for the second group) was also observed here, a finding interpreted to mean that attention to the relevant color-form cues focussed during the easy object training generalized broadly (along abstract continua) to the pattern problem. According to this view, the subjects learned to attend, for example, not just to the "red square and blue triangle" but to "colors and forms, whatever they may be."

These findings and interpretations are consonant with those of a recent study (Bensberg, 1958) on higher level retardates.

As a summary of our last experiment, it can be pointed out that what could not be taught by repeated differential reinforcement, could be taught by first focussing attention on correct stimulus dimension with an easier discrimination.

It is recognized that our theory of attention has been painted in broad strokes, but these notions can also be expressed in more precise, and mathematical, language. A probability theory is being developed for these data by Dr. Betty House, using some stochastic models developed by (Bush-Mosteller, 1955), together with Wyckoff's notion of "observing responses" (Wyckoff, 1952).

It is also recognized that our theory does not offer a unique interpretation of the data presented. What an attention theory of imbecile discrimination learning will do, however, is to integrate a group of diverse experimental findings, only a few of which we have selected to present.

We wish to conclude with just one broad theoretical notion, that the successful training of visual discriminations in young imbeciles is to a large extent a matter of engineering their attention.

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RESEARCH AND SERVICE SYNTHESIS IN PROGRAM DEVELOPMENT

ralph w. colvin

In the abstract realm of definition, we tend to define psychology as both a profession and a science and to stress the mutual interdependence that constructively exists between service and research. However, in the concrete task of playing one's life role as a psychologist, attempts at synthesis of service and research can indeed resemble attempts to blend the unblendable. The present paper describes the collaborative thinking and activity of two psychologists, Dr. Anne Ritter and myself, who have sought to evolve roles as clinician-researchers as we have participated with an interdisciplinary staff in the founding and development of an integrated treatment and research, day-care program for preschool retarded children and their parents, the Kennedy Child Study Center. In this pocess of defining and performing our roles as clinician-researchers we have given rather considerable thought and time to identifying and seeking solutions for problems of research and service synthesis in program development. I would share with you an account of our efforts to achieve this synthesis as we have participated in the development of the Kennedy Child Study Center program.

A close bond between research and service at the Kennedy Center was immeasurably aided by the fact that prior to its planning and opening several key members of the Kennedy Center staff had already worked together for several years at the Astor Home for Children, a residential treatment and research center for emotionally disturbed boys. These past staff interpersonal relations, and shared experiences in residential treatment and research, provided the basis for the simultaneous development of service and research programs at the Kennedy Center, rather than the customary pattern of having a service program completely developed before considering the luxury of research. Previous experience of the benefits gained from closely co-ordinated service and research provided the motivation for attempting an even more intensive synthesis. Every attempt was made to duplicate, in the Kennedy Center day-care program for the retarded, those aspects of the Astor Home residential treatment program that seemed conducive to service and research productivity as well as synthesis.

First of all, a treatment focus was established. Fundamental to this orientation is a favorable staff to child ratio with a relatively small group of children being serviced for a prolonged period of time by a large, multidisciplined staff representing the varied fields of education, speech, correction, social work, pediatrics, psychiatry, and psychology. This intensive and immediate concern for the entire child is supplemented by an extensive in-

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terest involving previous life history, comprehensive progress records, and long term future life planning. Treatment through life patterning, basic education, and recreation is conducted in the context of small, relatively permanent social groups having many of the dynamic qualities of a family unit. Plans concerning the size of the eventual over-all population at the Center are still being formulated. However, there is rather basic agreement that the ideal population would be large enough to provide the possibility for relatively homogeneous groupings, yet still small enough for every child to be known as an individual by key staff members. This limitation in the size of the population provides the opportunity for more intensive interaction between children as well as providing the possibility of each child being observed and known from a variety of professional points of view, a factor of primary significance in comprehensive diagnosis and treatment, but likewise of great advantage in research, especially when staff evaluations of all children on specific dimensions are desired, a research method particularly appropriate and productive in the study of the retarded. A multidisciplined staff, if focused upon a common objective and if communicating in a common frame of reference, can provide a fruitful source of varying points of view and methods which can be revealing of new problems and productive of unique solutions. Problems of one discipline can somethimes be readily resolved through use of methods quite familiar to another profession. A purposeful avoidance of professional departmentalization in our treatment, professional training, and research activities provides a flexibility of professional role which allows the individual to pursue special interests and capitalize on special capacities. A moderate caseload provides the satisfactions and insights obtained from intensive study and understanding, a situation resulting in good treatment as well as stimulating of research thinking and productivity. Research participation is expected of all staff members, some, if they choose, merely as observers or subjects, but most as active paper writing and giving participants. Assistance in research methodology, design, and reporting is made available to all staff members manifesting the slightest interest. Research experience and direction is given all trainees regardless of their profession. The availability of this guidance, a willingness to share data already gathered, and an attitude of research being considered a vital aspect of the over-all program results in heavy research participation by staff members as well as trainees working on thesis projects. Close co-ordination of these verious research activities results in the rapid accumulation of an integrated body of data. Imagine the combined contribution to a modest research program of six related thesis, a contribution being experienced this spring at Astor Home and hopefully in years to come also at the Kennedy Center.

Thus, in many areas it has been possible to pattern the new Kennedy Center day-care program for the retarded after a model presented by the Astor Home residential program for emotionally disturbed boys. However,

in still another area it has been possible in the day-care program to accomplish an objective unattainable in residential treatment, viz. the day by day participation of a child's parents. Although a small residential program provides an ideal setting for research in the interpersonal participation of children, research in the all important area of parent-child relationships in such a setting tends to be restricted to brief cross sectional or case history studies. Despite extensive casework efforts, the difficulties in obtaining sufficient data from parents and giving sufficient assistance to parents of children in residential treatment can greatly handicap therapy as well as the eventual adjustment of the child and his parents upon the child's return home. One must also recognize the trauma experienced by the child as the result of his separation from home and parents coupled with the blunting sameness of institutional living. Thus a day-care program has treatment advantages for the child who can be maintained with assistance in the home and also research advantages in terms of the increased opportunity to involve parents made readily available by the necessity of their bringing their children to and from the program.

Let us now proceed from this general description of the manner in which a day-care program evolved from an attempt to duplicate the more constructive aspects of a residential treatment and research program supplemented by certain assets inherent in day-care. Now to a discussion of the advantages associated with research personnel likewise playing vital service roles in a treatment program. Although it is often argued that service involvement detracts from research output and quality, our experience has indicated that such need not be the case. The researcher who closely identifies with and participates in the service functions of his organization, by the very token of his clinical role, establishes a common bond with his more service-oriented colleagues. When service colleagues thus realize that the researcher not only is interested in problems of theory and methodology but is also concerned with the individual patient as a human being, the basis exists for mutual identification, lessened threat, and better communication, human factors which foster greater co-operation with and broader participation in research. This broader sharing of research effort and responsibility not only results in increased output, but also this co-operative participation of workers of differing needs and points of view can stimulate research having bolder scope and greater significance. The fruitfulness of such association has become especially apparent to the writer as he has collaborated with social workers in the area of foster home selection and foster parent-child matching (Colvin, 1957). Psychologists seldom have access to so challenging a research area and even less seldom do social workers experience the benefits available in research exploration of their many service problem areas. Although service participation of the researchers can thus multiply output and enhance quality of research through greater co-operation and participation of service colleagues, the researcher with service responsibilities also

is in a position to obtain better co-operation from his research subjects if they also identify him as someone interested and participating in their treatment. Also, the researcher finds that significant psychological problems and methods for their investigation are often best identified in direct, intense clinical contact with one's subjects and the dimensions under investigation. Service participation also gives the researcher increased sensitivity to the applied as well as the theoretical implications of his findings.

Too often the researcher disappoints his service-oriented colleagues, who may even have co-operated in gathering data, by failing to share the service implications of research findings. In fact, all too often service colleagues are even denied the basic knowledge of results. Research in dynamically meaningful areas often is productive of data potentially of significance in the understanding and treatment of the individual subjects involved. Such significant clinical data should be shared at the conference table and reported in the individual subject's case history. As an example, consider the possible significance of sociometric research findings to an understanding of a child by clinicians with an interpersonal orientation. Along with the customary therapy and social work reports, case histories could well include a research section for the recording of such data.

The research-clinician can likewise constructively shoulder a share of the administrative functions of his organization. Administrative status can give impetus to one's research program. Administrative responsibility can help one see one's research objectives in their true context. Administrative decisions concerning such vital matters as admission, treatment, and discharge of the patient, who is also a research subject, demand the judgment of the therapist who is also the researcher.

Now let us turn from the general to the more specific, from a discussion of general aspects of research and service synthesis in program development, to a brief description of our attempts to formulate a specific project consistent with this desire for synthesis.

The Kennedy Child Study Center is dedicated to the day-care treatment, training and education of preschool retarded children and the guidance of their parents. Our available research subjects thus fall into three categories: the children, their parents, and staff members. Our statement of purpose and function suggests the following basic propositions:

1. A day care program presupposes the desirability of retaining the retarded child in his own home and community.
2. Treatment, training, and educational foci are based upon the expectancy of growth, treatment implying that this development also has medical and psychiatric aspects. These endeavors for growth have the long term objective of assisting the child to become a productive, self-sustaining adult.

3. The decision to work with the child at preschool age implies acceptance of a need for early diagnosis and early direction towards growth.

4. Emphasis upon parent guidance indicates acceptance of the parent as the primary agent in the achievement of the above objects.

If these propositions represent the basic functions of the program and if research is to be synthesized with the services rendered these children and parents, our long term research problem becomes one of *determining how best the staff can assist the child and his parents so as to increase the probability of the child becoming a productive, self-sustaining adult.*

Both service and research functions dictated the necessity of selecting methods for determining the present status of the child and his parents at the time of application, as well as for determining the extent of growth as they participate in the program. Previous research by the author (Colvin, 1958; Colvin, Wagner, 1959), and many others within the frame of reference of an interpersonal theory of development, has indicated the primary significance of the parent-child relationship in the social and intellectual development of the child. Within this frame of reference a battery of measures was selected. The child's intelligence and social status are being measured by the traditional tests of these dimensions: The Stanford-Binet and the Vineland Social Maturity Scale. To determine parent attitudes to be correlated with these intellectual and social measures of the child, various procedures are being administered to each parent in individual sessions with the goal of obtaining not only the attitudes of each parent toward the child but also toward one another. One of these procedures, developed by the author, involves asking each parent separately to rate the child, spouse, and self on a number of dimensions through locating first the child and then the spouse and finally the self in a series of identical profile silhouettes presented as representing the child, spouse, and self standing in line among peers according to status on each given dimension (Colvin, 1957; Colvin, 1958; Reidy-Colvin, 1959). A third body of data in this study consists of staff members' ratings of the child on several of the same dimensions measured in parent attitude testing.

From a service point of view it is believed that each measure used increases staff understanding of the individual child and his parents. These data serve as a guide to the training of the child and individual and group work with his parents. Readministration of test procedures will provide an evaluation of progress. Staff ratings of the child help to direct staff attention to significant dimensions concerning the child's status and progress. They likewise serve as a means of establishing a common language system for professionals of differing disciplines.

From a research point of view, this project could well contribute to the understanding of the attitudes of parents toward retarded children, but even of greater possible significance, it may tell us something concerning the influence of parent attitudes toward one another, as well as toward their child upon the intellectual and social development of the individual child. Possibly also, research in this area can be productive of findings which can assist us toward the achievement of our long range goal of helping retarded children to become self-sustaining, productive adults. In the context of this goal we are especially interested in identifying those parent attitudes that occur concomitant with a child's social maturity greatly exceeding his mental maturity, for with children of similar mental maturity these differences in social maturity often become the determinants of whether the child will become the dependent or the self-sustained, the productive or nonproductive adult.

The formulation of this specific research study was guided by a sincere attempt at synthesis of research and service. We believe that it can and will contribute in both areas. We would not wish to imply that we believe all, or even most, research need necessarily also represent an immediate service contribution. However, our experience has convinced us that research proceeds most rapidly and the output is of increased quality when it starts at the same time and proceeds side by side with service, and that most problems of service and research synthesis in program development remain small problems when the research-clinician can maintain dual identifications, identifications with the service as well as the research goals of his organization.

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DISCUSSION

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The papers presented in this symposium are certainly a varied lot. In view of the problems associated with mental retardation, this seems most appropriate. There are few other areas where medical nomenclature and psychophysics are likely to rub elbows at the same table.

While I have great respect (and with good reason) for the work Dr. McCulloch has described, an etiologic classification of mental retardation continues to befuddle me. The reason for this, I believe lies in the fact that the considerable effort put into the attempt to define mental retardation as a unique class has never been too convincing to me. That others share this concern is indicated by the bulk of articles on the subject.

Yepson (1941) reviewed a hundred or more criteria and descriptions, concluding that none actually defined mental deficiency. One can build up a 30-item bibliography over the past 10 years with little effort. The conclusion to be drawn seems to have been expressed neatly by Clarke (1957) who stated that the concept of mental deficiency was not a scientific one but rather social, legal, and administrative. Similar feelings must have led Cantor and Cromewell (1957) among others to stress the need for each of the disciplines involved to clarify and investigate their own concepts.

Nevertheless, we shall continue to need biometric data, vital statistics for which this classification serves as an organizing basis. Those of you who are familiar with the efforts to survey populations are well aware of the problems. One can almost sympathize with the harried administrator who simply multiplies the number of school-aged youngsters in his area by some authoritative estimate and thus arrives at a notion of how many classrooms or special teachers are needed, or even how limited funds for programs including research should be distributed.

Perhaps you have not thought of this as a research area but the use of diagnostic categories as a function of geography, rurality, income level, concentration of professional personnel and the like can be most revealing. Too frequently, it reveals the disagreement among perfectly respectable men on how the categories should be applied.

I remain convinced that an etiological classification of a social, legal and administrative concept leaves much to be desired. To say that a child is retarded has some common sense meaning to all of us but does not lead to very precise recommendations or predictions of subsequent course. To say

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that he has an IQ of 50 and that the etiology is congenital cerebral maldevelopment with phenylketonuria doesn't markedly add to the knowledge of the special class teacher.

From this, many practical and theoretical problems follow. Is it the psychologists' job to provide a detailed anaylsis of the child's strengths and weaknesses upon which other disciplines can act? I think it is. We should be able to specify what sensory difficulties relate to the child's perception of the world about him. The breakdowns in the learning process must similarly be spelled out. The problem of relating such psychopathology to the integrity of the organism remains most difficult and fascinating.

Is there any specific psychopathology associated with phenlketonuria? What variables affect its severity? Under what circumstances can one be biochemically, phenylketonuric yet have a normal IQ? Do metabolic errors act through some common path so that the associated psychopathology may not be clearly related to etiology? To what extent is the underlying psychopathology in disorders marked by social incompetence similar aside from whether we are discussing retardation, schizophrenia or brain damage?

In short, if we had spent as much time endeavoring to tease out what psychological processes are necessary for social competence as we have in developing selection procedures to pick out people who could put nuts on bolts, we might be much further along.

The symptoms associated with phenylketonuria may be in the organization of sensory impulses, breakdowns in discrimination, rather than retardation. The work exemplified by Drs. Zeaman and Clausen's papers seems to be potentially fruitful in helping us arrive at a better level of psychological classification and consequently more meaningful predictive procedures for application in the clinic and school.

An area in which there is considerable interest and which bears directly on clinic program is the acceptance of the child by his family as a function of religious and ethnic background. Dr. Edward Wellin of the American Public Health Association recently reported some suggestive material in this area at a bi-regional conference on mental retardation sponsored by the Children's Bureau and the Connecticut State Department of Health. You probably know Saenger's (1957) publication, *The Adjustment of Severely Retarded Adults in the Community*. He includes such family data along with the consideration of community resources.

Here the relation between the clinic, administrative and laboratory research is seen most clearly. The best clinic cannot operate in a vacuum. In many ways more precise and detailed information is needed about both the individual and his psychological environment. Parents, educators, therapists, and administrators await additional and better information.

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